

print; but Mr. Crooke has introduced many improvements. He has brought the statistics up to date, secured greater uniformity in spelling the vernacular names, added numerous footnotes, correcting statements and theories which have been proved to be erroneous or doubtful, and given an appreciative memoir of the author's pioneer anthropological work in India.

Important additions also have been made to the illustrations, which previously had been restricted to rather inferior reproductions of several of the beautiful photographs by Sir B. Simpson in Dalton's "Descriptive Ethnology of Bengal"—a work also now difficult to procure. The inclusion of some excellent photographs for other parts of India makes the series now more representative.

The main thesis of the book is the contentious one on the origin of the caste-system. There is no doubt that Risley exaggerated the antiquity of the present social grouping of the people in his belief that the supposed fixity of caste dated to a remotely early period, and had thus presumably preserved in India a remarkable purity in physical type. Mr. Crooke, however, shows that caste in its modern rigid form in India is relatively recent. The older custom, as seen in the Vedas and Epics, recognised the possibility of a member of the "warrior" class (*Kshatriya*) becoming a Brahman, or *vice versa*. A second wife could be taken from any lower class, and such laxities in practice still prevail in the more outlying districts of the Himalayas and the Panjab amongst groups of relatively pure Aryan stock. In many areas in India it is shown that the existing tribes and castes represent mixtures of various races which had amalgamated within a comparatively late historic period.

On the disputed origin of the warlike castes of Upper India, the long-headed Rajputs, Jats, and others, Risley opposed the present fashionable theory which would bring these people from Central Asia. This he did on the old idea that the people of Central Asia were of a uniform brachycephalic type, which is now known to be certainly not the case. Mr. Crooke seems to approve the recent theory of Smith and others that the Gurjari and the other associated "Rajput" tribes of Upper India are largely, if not wholly, formed by the Hun invaders of the early centuries of the Christian era. Yet it is precisely in these and associated tribes that Risley finds his purest Aryan type!

Regarding the Marathas, the dominant tribe of Western India, Risley's suggestion, based upon some reputed, but not clearly established, brachycephalism in the Deccan, is that they originated

in bodies of Scythians driven down from the Western Panjab and intermarrying with the Dravidians. Mr. Crooke points out that there is no historical nor even traditional evidence of any Scythian migration into the Deccan; whereas the Marathas are closely connected with a mixed race of cultivators extending over a wide area, from the Deccan to the Ganges Valley, and known as Kumbi or Kurmi. These and other results of later research would no doubt have been considered by the author himself had he lived.

To many workers the most important part of the book will perhaps be the anthropometric tables, consisting of seriations of the several physical types. These and the maps of caste-distribution are of permanent value. The large collection of caste-proverbs will be found curious and interesting to students of folk-lore.

The only mistake we have noticed in the references is that the article cited at page 2 from the "Journal, Royal Asiatic Society" should be for the year 1898, and not 1908.

L. A. WADDELL.

PHILOSOPHY OF SCIENCE.

- (1) *Proceedings of the Aristotelian Society*. New series, vol. xv., containing the papers read before the Society during the Thirty-sixth Session, 1914-1915. Pp. 441. (London: Williams and Norgate, 1915.) Price 10s. 6d. net.
- (2) *Selections from the Scottish Philosophy of Common Sense*. Edited by G. A. Johnston. Pp. vii+267. (Chicago and London: The Open Court Co., 1915.) Price 3s. 6d. net.

(1) **O**F the twelve papers and symposia collected in the Proceedings of the Aristotelian Society for the last session, four are direct criticisms of positions taken up by Mr. Bertrand Russell. In the inaugural address on "Science and Philosophy," Dr. Bosanquet criticises the view, maintained in Mr. Russell's recent Lowell Lectures, that philosophy, as the science which aims at stating all that can be known *a priori* about all possible worlds, should be ethically neutral, and that it is just because philosophy in the past has been biased by the desire for agreeable conclusions that philosophy has not made the same progress as the physical sciences. Dr. Bosanquet holds that this view implies an antecedent limitation of philosophy, and involves the confusion that because the interest of philosophy is purely theoretical, therefore its subject-matter is itself theory and its objects.

In a paper of extraordinary acuteness, Mr. C. D. Broad deals with Mr. Russell's attempt in

the same lectures to work out a phenomenalist philosophy of science. All physical science starts with directly observable sense-data, and physical laws can only be verified by finding that predictions as to the nature of sense-data based on these laws are actually borne out by direct observation. Accordingly Russell argues that it is theoretically possible, on the principle of Ockham's razor, to state all that is implied by the laws of physics in terms of sense-data alone.

Mr. Broad urges (a) that Russell's attempt at phenomenism is not nearly so "economical" as he supposes. Whereas the ordinary view assumes imperceptible physical objects, the qualities and existence of which are inferred from sense-data, Russell gives us an immensely greater number of imperceptible sense-data, likewise inferred from the sense-data of which we are immediately aware, which are of the same logical kind as physical objects on the ordinary view. The difference in simplicity is not, then, in Russell's favour. (b) Russell's theory is very far from expressing the laws of physics in terms of sense-data. *E.g.*, take the statement that iron expands when heated. It is not enough to say that if a certain group of grey visual sense-data is accompanied by a certain group of hot tactual sense-data, then as the latter get hotter the former get larger. Usually the increase in length can only be detected by a micrometer gauge. But the micrometer must in turn be analysed into visual and tactual sense-data, and further the facts which on the ordinary physical theory we call the proper use of the micrometer must also be resolved into muscular and other sense-data. Exact statement of a physical law in purely phenomenal terms is, therefore, intolerably complicated. What physical science and common sense do is to analyse such complicated but directly verifiable statements into two laws more general but not separately verifiable, one as to changes outside the body, "Iron expands when heated," and the other stating the action of external objects upon the body which results in the awareness of sense-data and of changes in them.

In a paper entitled "Complexity and Synthesis" Mrs. Adrian Stephen compares the views of Russell and Bergson as to the nature of sense-data. Prof. Stout's paper, "Mr. Russell's Theory of Judgment," is a criticism of the treatment of judgment in Russell's "Problems of Philosophy." Russell there maintains that the fact of error forces us to the conclusion that judgment is not a dual, but a multiple relation, *i.e.*, one which, like "between," involves more than two terms. Othello's judgment that Desdemona loves Cassio is not a relation joining Othello's mind to the one

objective complex, Desdemona's love of Cassio, because the falsity of Othello's judgment means that there is no such thing as this complex: the belief unites Othello's mind and the three objects Desdemona and loving and Cassio. Stout urges that on this view there is nothing before the mind to correspond to actual fact. The mind in judgment cannot be aware of the judgment complex, because that complex includes the act of judgment. And the objects of judgment have, apart from the relation of judgment, no order which can be compared with the factual order which is to determine their truth or falsity.

In his paper, "Conflicting Social Obligations," Mr. G. D. H. Cole attempts to provide a philosophical basis for the social and economic doctrine he has put forward in his recent works, "The World of Labour" and "Labour in War Time," and in a number of articles in the *New Age* and the *Herald*. Mr. Cole's object is to restate Rousseau's doctrine of the general will in such a way as to leave room for many other associations, industrial and religious, as well as the State. Mr. Cole's demand is for functional devolution of power for such associations, "a demand that the State itself should be regarded only as an association—elder brother, if you will, but certainly in no sense father of the rest." And if the individual finds himself torn between loyalty to the State and loyalty to the industrial body to which he belongs, we can only say, with Rousseau, that he ought to consider the good of the community as a whole.

Messrs. McDougall, Shand, and Stout write on "Instinct and Emotion"; Prof. Lloyd Morgan on Berkeley's doctrine of *esse*; Mr. A. Cock on the "Æsthetic" of Croce; Dr. Tudor Jones on the philosophy of values; Prof. A. Robinson on the philosophy of Maine de Biran; Dr. Aveling on "Some Theories of Knowledge" (his treatment is largely based on the recent work of Father Leslie J. Walker); and Miss E. E. Constance Jones and Messrs. Bosanquet and Schiller on "The Import of Propositions."

(2) Mr. G. A. Johnston has earned the gratitude of students of philosophy for collecting within a small compass the more characteristic passages from the works of Reid, Ferguson, Beattie, and Dugald Stewart. At a time when many are inclined to distrust the Kantian solution of Hume's sceptical difficulties it is interesting to read an alternative solution of these difficulties in the natural realism of the Scottish Philosophy of Common Sense. In a brief introduction Mr. Johnston gives an account of the relation of Reid and his followers to Locke, Berkeley, and Hume.

E. H. STRANGE.